2020

Tool PS2 Instructions and Command Guide

THE ULTIMATE EVERGROWING DTL-T RESOURCE GUIDE

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Chapter 1:

What to do When you first Get your tool

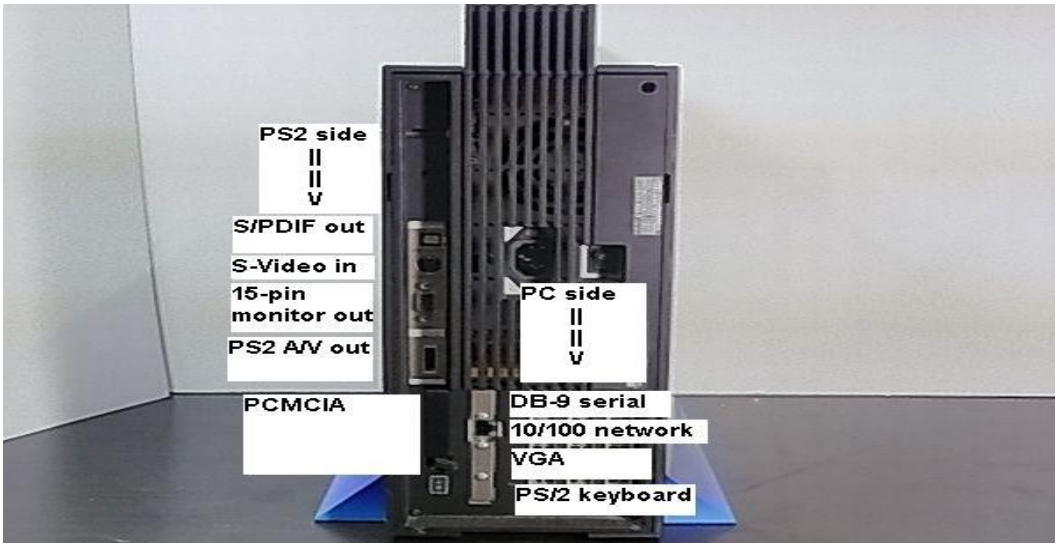
If you just received your tool in the mail in one piece, congratulations, your luckier than most. The tool ps2 is a 20+ year old piece of equipment and the ABS plastic shell tends to get brittle with age. The first thing you should do is inspect your tool for any shipping damage as this may cause issues down the road.

Now once you've inspected the system, the first rule in owning one of these systems or any of these systems is backing up the hard drive**(If your HDD is missing or broken, you can skip this step.)** the hard drive could contain anything from rare unreleased games to rare files that could benefit the community of collectors and researchers interested in this system. The other benefit of backing up the hard drive is, these drives are 20+ years old and been spinning all their life, the average life expectancy of an HDD is about 12 years so these drives are already overdue for a replacement. There are multiple ways to back up a hard drive and in my opinion the best program recommended to me was **HDD RAW COPY.**

https://hddguru.com/software/HDD-Raw-Copy-Tool/

Once your HDD is backed you can start hooking up your system to use.

Hooking up your Tool PS2 can be very confusing at first but its strait forward once you do it once. Here is a picture of the back of the system.



In order to hook up the tool, you're going to need a small Phillip's screw driver to unscrew the bottom cover plate on the pc card near the bottom. Under there you will find a VGA port, a PS/2 keyboard port and a serial port (depending on which tool you have your pc card may also have a mouse PS/2 port and no serial port). You are only going to use the VGA port and the keyboard port. The card you are plugging into runs the entire Linux computer side of the tool, it's basically a complete PC running on an expansion card. You will need a separate display so the optimal setup

should be 2 displays 1 connected to the VGA port and the other connected to via av to the av port on the tool, and 1 PS/2 Keyboard. At that point you are ready to plug your tool in. The tool Ps2 has a switching power supply so no matter if you're in a 110v or 240v region, you won't have to worry about frying the system by plugging it in. Once you have the tool plugged in, press the power button and it should begin booting on the monitor connected via VGA.

Chapter 2: Tips of the Trade

Here is a list of tips that has helped me with my tool when I first got it:

1. Use the VGA Port on the card at the bottom of the TOOL in the card expansion bay/ The VGA under a metal shield/cover (If your unit has it still screwed on)

2. Don't handle the unit by holding the "Mohawk" and "Front Facade." Handle the unit by holding its rear and under side (When I reference the top of the unit, I mean as if the unit is placed vertically and the "top" is where the on/off and reset buttons are located)

3. Be very gentle with the Memory Card slots - the plastic covers are extremely delicate (they're made from plastics - some dated back to 1999, the metal/tin rods are extremely brittle)

4. You don't need a transformer - the TOOL supports 110V-240V at any frequency used in your houses AC

5. A PS/2 Keyboard is recommended but not required, you can use a USB to PS/2 dongle and a usb keyboard, but the keyboard has to be an old keyboard that still has PS/2 technology built in. Try a keyboard between 2001 and 2006.

6. The USB ports on the front of the TOOL are for the PS2's hardware, not the TOOLs

7. Check to see if your Ethernet Cable is plugged in properly - (I spent a day trying to figure out why my net console wasn't working)

8. If you have the TOOL placed horizontal make sure the TOOL Logo is facing up/visible. (So the CD/DVD drive is accessible and the HDDs are running in the recommended orientation)

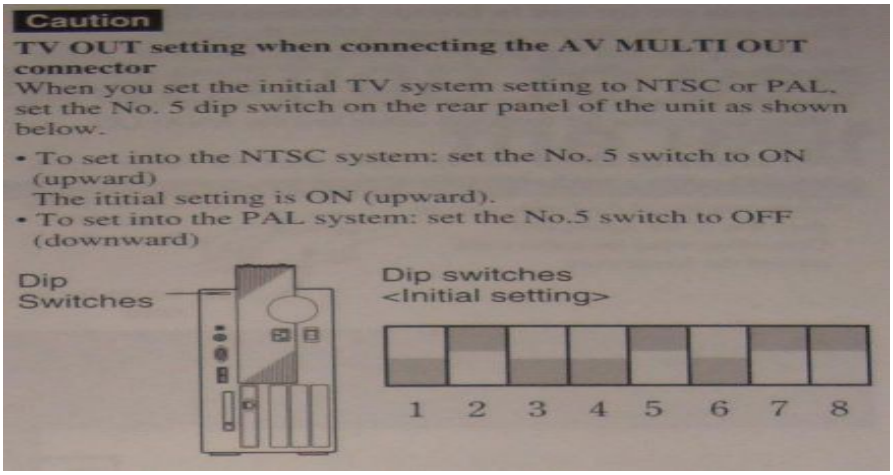
9. When selling a TOOL, be careful how you package it - make sure that you have heaps of bubble wrap (Thick Types) and use Biodegradable Packing Peanuts.

10. DO NOT EVER TURN OFF THE UNIT VIA PULLING THE POWER CORD WHILE IT IS RUNNING (If I hear a TOOL dying that that I'll die of disappointment)

11. If you take apart the system, use the guide in the FAQ.

12. You don't need both the HDDs you only need the 1st one. The first HDD is the one that is connected to the Linux PC card. (The second one was supposed to be used with the DTL-T14000 CD/DVD Emulator) but its also a backup Hdd if the Main HDD dies.

13. DO NOT change the dip-switches on the rear of the TOOL by guessing - See the SDK documentation for what they do before changing them!


Caution
TV OUT setting when connecting the AV MULTI OUT connector
When you set the initial TV system setting to NTSC or PAL, set the No. 5 dip switch on the rear panel of the unit as shown below.
• To set into the NTSC system: set the No. 5 switch to ON (upward)
The ititial setting is ON (upward).
• To set into the PAL system: set the No.5 switch to OFF (downward)
Dip Switches
Dip switches <Initial setting>
1 2 3 4 5 6 7 8

14. Make sure the dip-switches on the front of the TOOL are set to, "TOOL" and "DVD."

15. Make sure the TOOL can breathe and is well ventilated (Some systems can get up to 100 degrees C, it doesn't really matter but still, I'd die if I hear about a TOOL dying from lack of cool air -on the owner’s accident-)

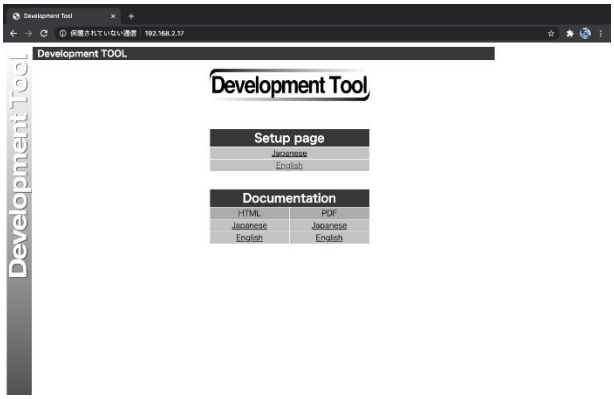
16. If you have a DTL-T15000 You're lucky - Your TOOL is a Performance Analyzer and can be used with the Performance Analyzer Program in the 2005 SDK to show how games are using the system and developers can make their games run way more efficiently by utilizing the PS2's Hardware better.

17. If your hard drive dies, it is best to use a compact flash card with appropriate compact flash to IDE adaptor. The card I am using is a 32gb SanDisk extreme 120mb/s

18. if your disc drive is not reading discs your laser may have died. The compatible model to replace it with is KHS-400C. The same model as the 1st gen Japanese PlayStation 2.

19. Some tool ps2 systems can run retail discs without the master patch needed. Here is a video of this in action. ***https://youtu.be/uMl9RIr8TG8***

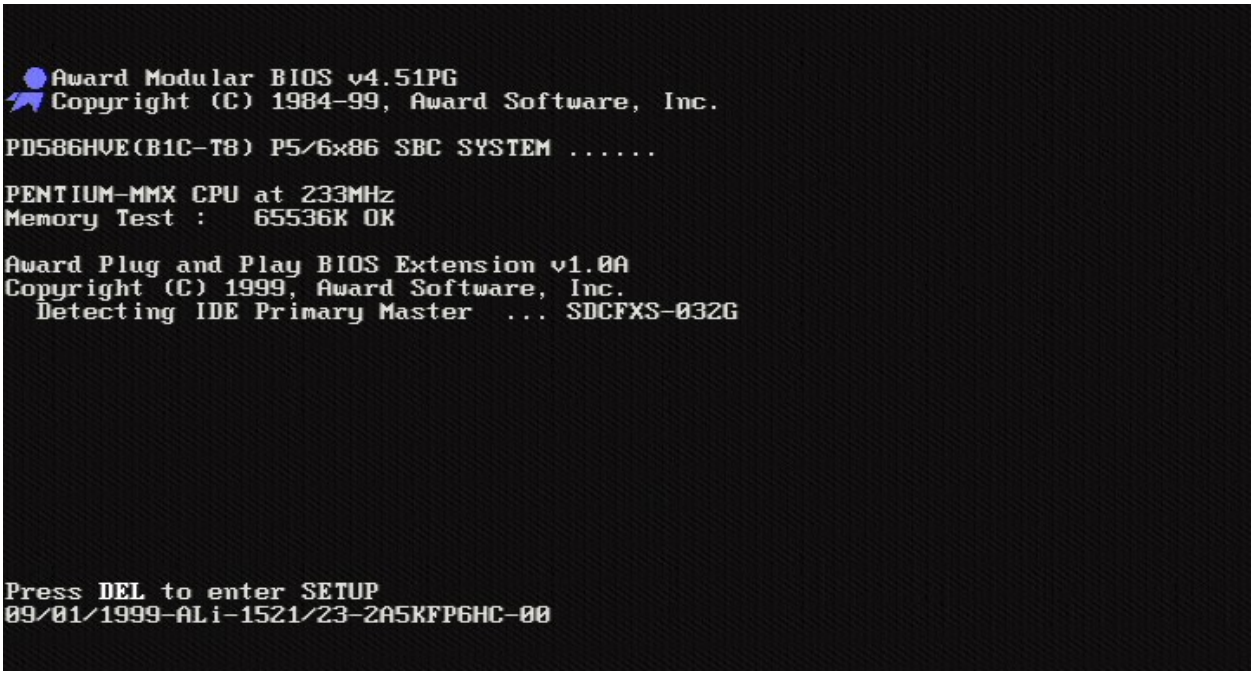
20. to check to see if your tool ps2's network settings are properly configured, try typing your tool's IP address into an internet browser. it should look like this if done correctly.



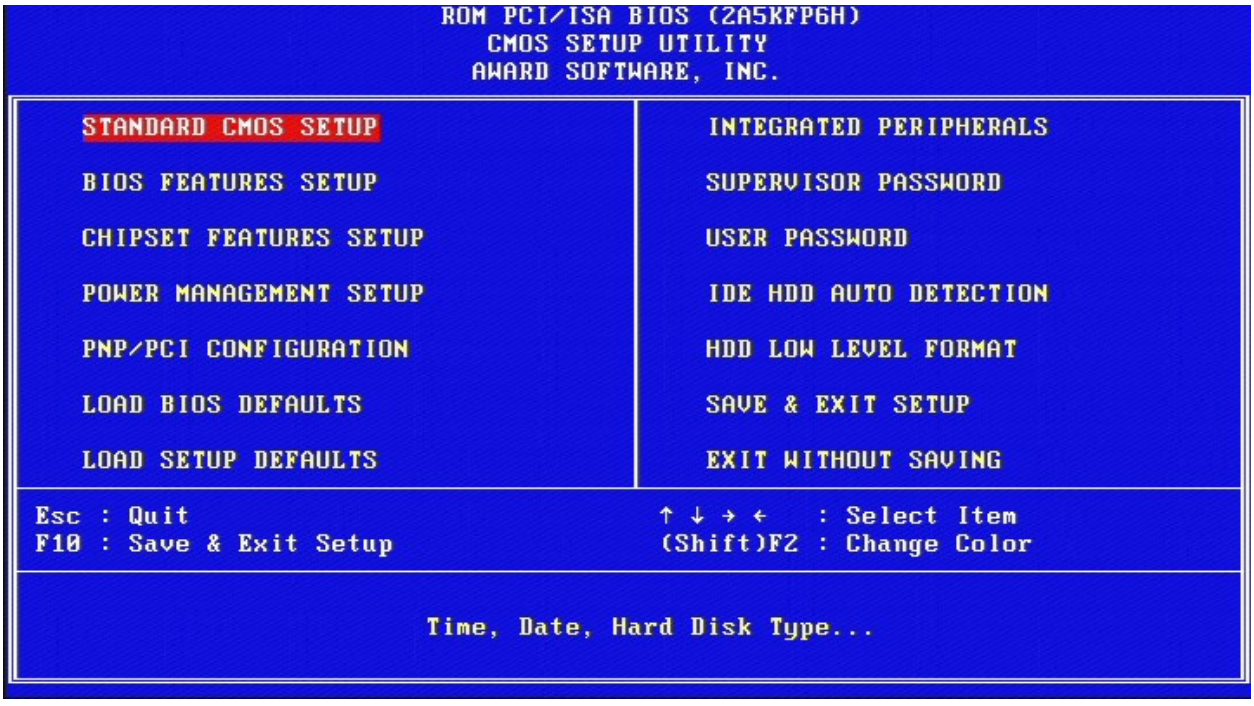
Chapter 3: Proper Bios Settings

Please view the pictures below and set your bios settings to match exactly.

This is the POST screen. Spam DEL during this time...

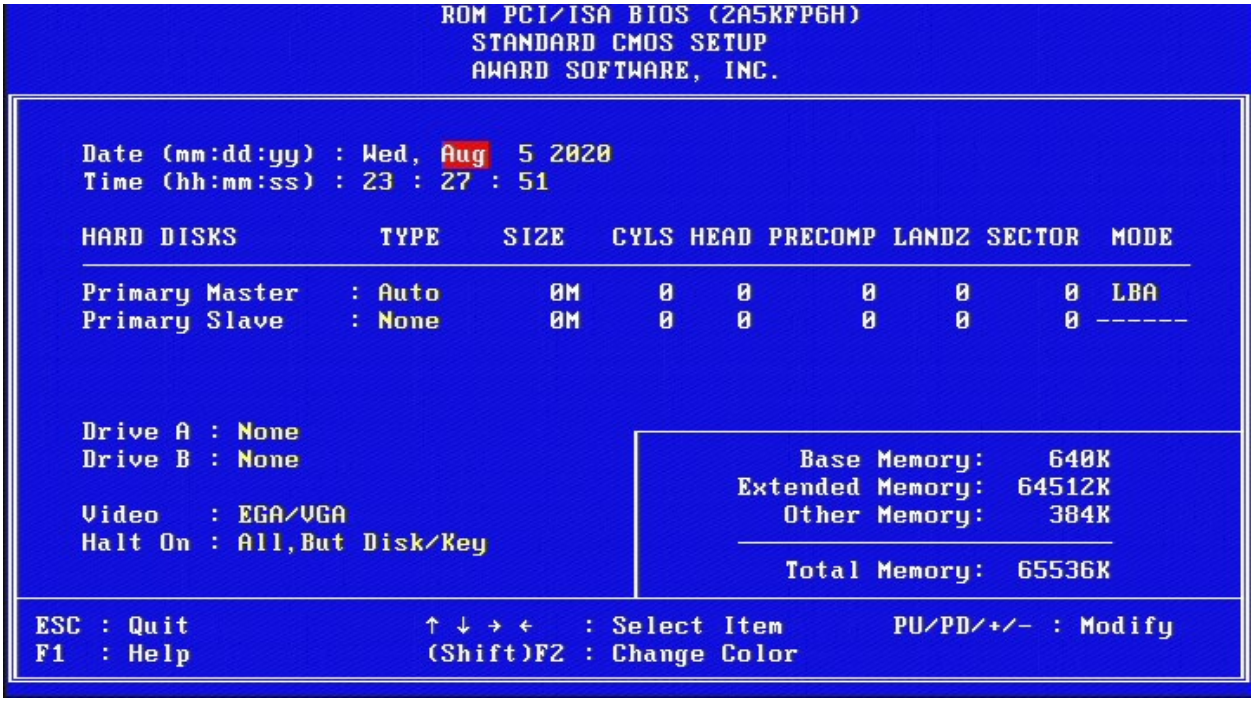

Award Modular BIOS v4.51PG
Copyright (C) 1984-99, Award Software, Inc.
PD586HVE(B1C-T8) P5/6x86 SBC SYSTEM ......
PENTIUM-MMX CPU at 233MHz
Memory Test : 65536K OK
Award Plug and Play BIOS Extension v1.0A
Copyright (C) 1999, Award Software, Inc.
Detecting IDE Primary Master ... SDCFXS-032G
Press DEL to enter SETUP
09/01/1999-ALi-1521/23-2A5KFP6HC-00

to enter CMOS SETUP UTILITY. On here, select "LOAD BIOS DEFAULTS" to reset the settings.

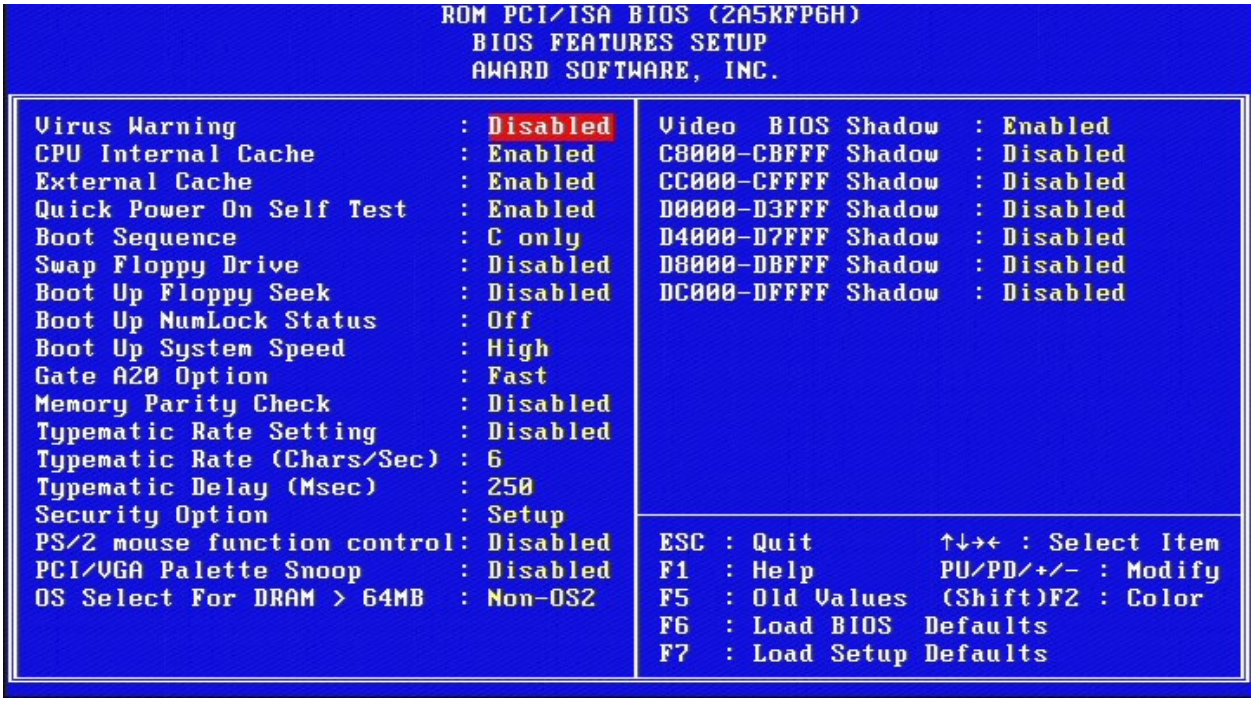


Now enter the following menus:

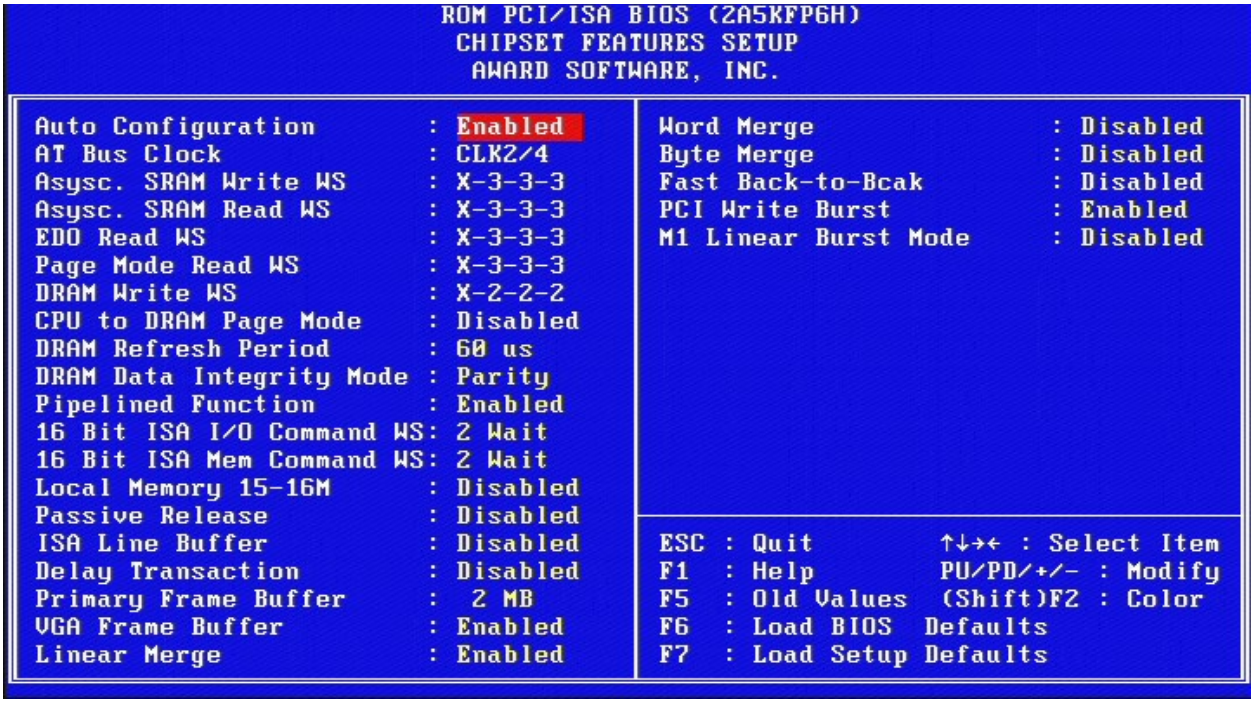
STANDARD CMOS SETUP. Be sure you enter date/time in UTC/GMT+0 time zone!


ROM PCI/ISA BIOS (2A5KFP6H)
STANDARD CMOS SETUP
AWARD SOFTWARE, INC.
Date (mm:dd:yy) : Wed, Aug 5 2020
Time (hh:mm:ss) : 23 : 27 : 51
HARD DISKS TYPE SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE
Primary Master : Auto 0M 0 0 0 0 0 LBA
Primary Slave : None 0M 0 0 0 0 0 ------
Drive A : None
Drive B : None
Video : EGA/VGA
Halt On : All,But Disk/Key
Base Memory: 640K
Extended Memory: 64512K
Other Memory: 384K
Total Memory: 65536K
ESC : Quit
F1 : Help
↑ ↓ → ← : Select Item
(Shift)F2 : Change Color
PU/PD/+/- : Modify

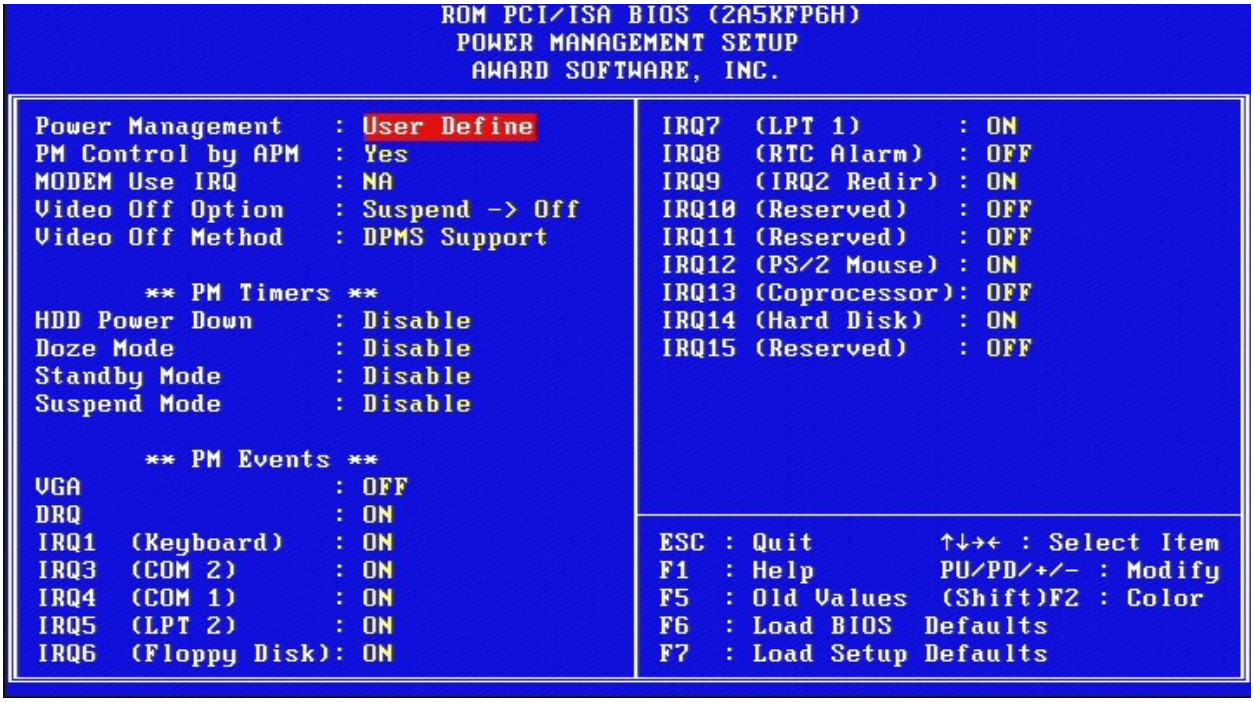
BIOS FEATURES SETUP


ROM PCI/ISA BIOS (2A5KFP6H)
BIOS FEATURES SETUP
AWARD SOFTWARE, INC.
Virus Warning : Disabled
CPU Internal Cache : Enabled
External Cache : Enabled
Quick Power On Self Test : Enabled
Boot Sequence : C only
Swap Floppy Drive : Disabled
Boot Up Floppy Seek : Disabled
Boot Up NumLock Status : Off
Boot Up System Speed : High
Gate A20 Option : Fast
Memory Parity Check : Disabled
Typematic Rate Setting : Disabled
Typematic Rate (Chars/Sec) : 6
Typematic Delay (Msec) : 250
Security Option : Setup
PS/2 mouse function control: Disabled
PCI/VGA Palette Snoop : Disabled
OS Select For DRAM > 64MB : Non-OS2
Video BIOS Shadow : Enabled
C8000-CBFFF Shadow : Disabled
CC000-CFFFF Shadow : Disabled
D0000-D3FFF Shadow : Disabled
D4000-D7FFF Shadow : Disabled
D8000-DBFFF Shadow : Disabled
DC000-DFFFF Shadow : Disabled
ESC : Quit
F1 : Help
F5 : Old Values
F6 : Load BIOS Defaults
F7 : Load Setup Defaults
↑↓→← : Select Item
PU/PD/+/- : Modify
(Shift)F2 : Color

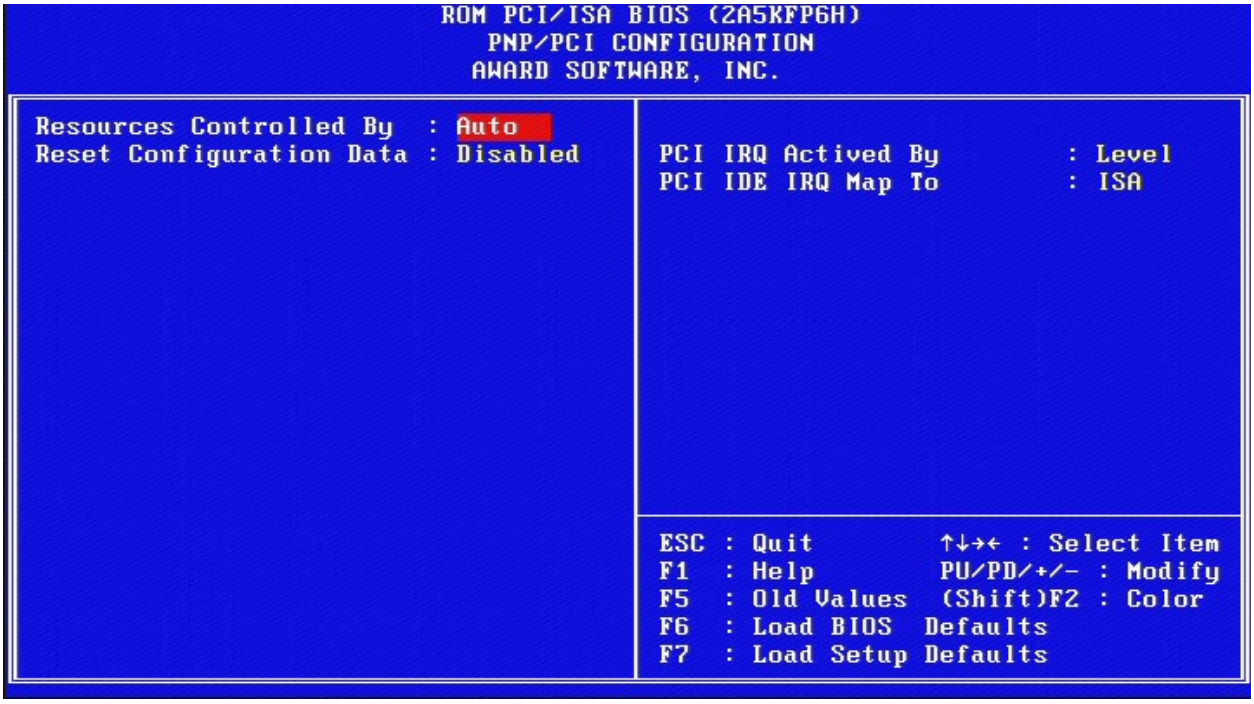
CHIPSET FEATURES SETUP.


ROM PCI/ISA BIOS (2A5KFP6H)
CHIPSET FEATURES SETUP
AWARD SOFTWARE, INC.
Auto Configuration : Enabled
AT Bus Clock : CLK2/4
Asysc. SRAM Write WS : X-3-3-3
Asysc. SRAM Read WS : X-3-3-3
EDO Read WS : X-3-3-3
Page Mode Read WS : X-3-3-3
DRAM Write WS : X-2-2-2
CPU to DRAM Page Mode : Disabled
DRAM Refresh Period : 60 us
DRAM Data Integrity Mode : Parity
Pipelined Function : Enabled
16 Bit ISA I/O Command WS: 2 Wait
16 Bit ISA Mem Command WS: 2 Wait
Local Memory 15-16M : Disabled
Passive Release : Disabled
ISA Line Buffer : Disabled
Delay Transaction : Disabled
Primary Frame Buffer : 2 MB
VGA Frame Buffer : Enabled
Linear Merge : Enabled
Word Merge : Disabled
Byte Merge : Disabled
Fast Back-to-Bcak : Disabled
PCI Write Burst : Enabled
M1 Linear Burst Mode : Disabled
ESC : Quit ↑↓→← : Select Item
F1 : Help PU/PD/+/- : Modify
F5 : Old Values (Shift)F2 : Color
F6 : Load BIOS Defaults
F7 : Load Setup Defaults

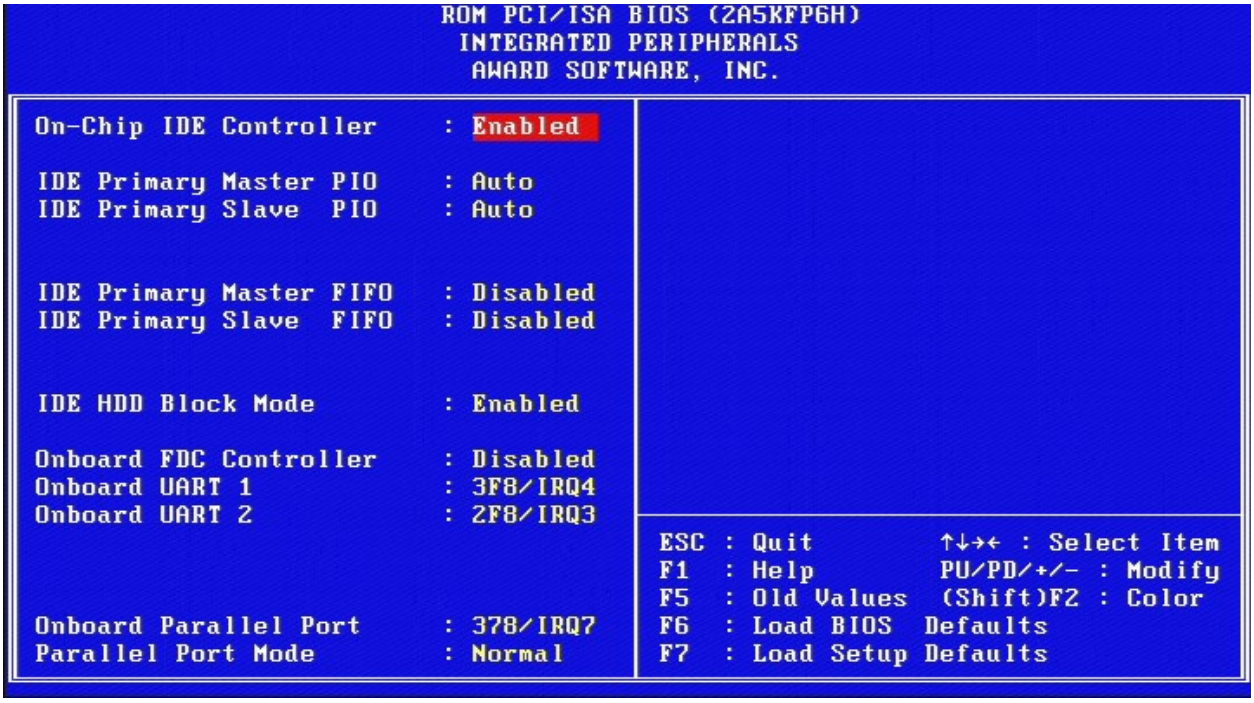
POWER MANAGEMENT SETUP.


ROM PCI/ISA BIOS (2A5KFP6H)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.
Power Management : User Define
PM Control by APM : Yes
MODEM Use IRQ : NA
Video Off Option : Suspend -> Off
Video Off Method : DPMS Support
** PM Timers **
HDD Power Down : Disable
Doze Mode : Disable
Standby Mode : Disable
Suspend Mode : Disable
** PM Events **
VGA : OFF
DRQ : ON
IRQ1 (Keyboard) : ON
IRQ3 (COM 2) : ON
IRQ4 (COM 1) : ON
IRQ5 (LPT 2) : ON
IRQ6 (Floppy Disk): ON
IRQ7 (LPT 1) : ON
IRQ8 (RTC Alarm) : OFF
IRQ9 (IRQ2 Redir) : ON
IRQ10 (Reserved) : OFF
IRQ11 (Reserved) : OFF
IRQ12 (PS/2 Mouse) : ON
IRQ13 (Coprocessor): OFF
IRQ14 (Hard Disk) : ON
IRQ15 (Reserved) : OFF
ESC : Quit ↑↓→← : Select Item
F1 : Help PU/PD/+/- : Modify
F5 : Old Values (Shift)F2 : Color
F6 : Load BIOS Defaults
F7 : Load Setup Defaults

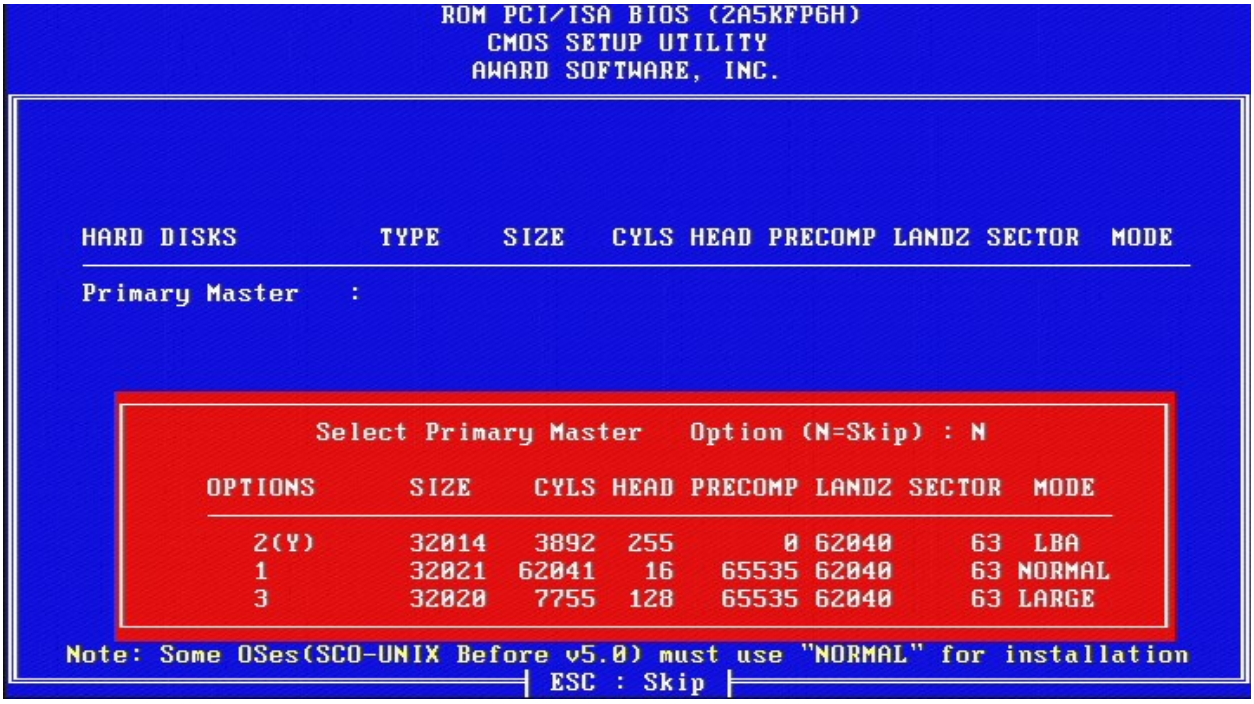
PNP/PCI CONFIGURATION.


ROM PCI/ISA BIOS (2A5KFP6H)
PNP/PCI CONFIGURATION
AWARD SOFTWARE, INC.
Resources Controlled By : Auto
Reset Configuration Data : Disabled
PCI IRQ Actived By : Level
PCI IDE IRQ Map To : ISA
ESC : Quit ↑↓→← : Select Item
F1 : Help PU/PD/+/- : Modify
F5 : Old Values (Shift)F2 : Color
F6 : Load BIOS Defaults
F7 : Load Setup Defaults

INTEGRATED PERIPHERALS.

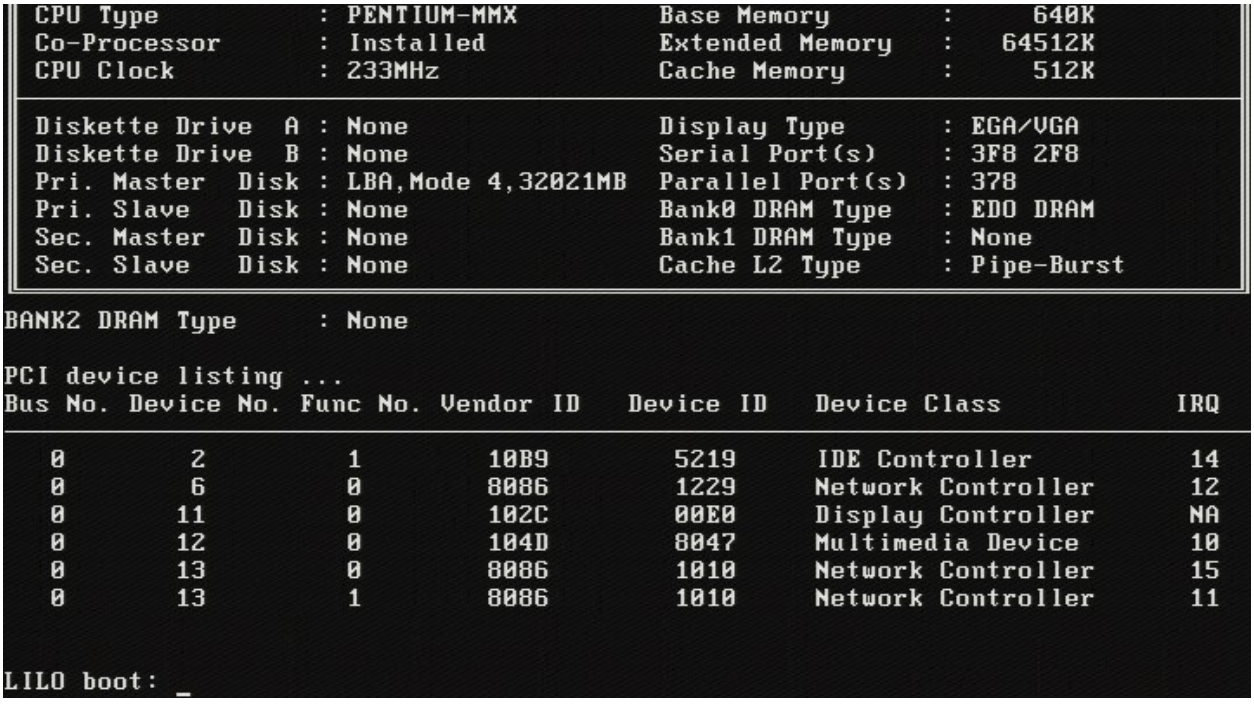

ROM PCI/ISA BIOS (2A5KFP6H)
INTEGRATED PERIPHERALS
AWARD SOFTWARE, INC.
On-Chip IDE Controller : Enabled
IDE Primary Master PIO : Auto
IDE Primary Slave PIO : Auto
IDE Primary Master FIFO : Disabled
IDE Primary Slave FIFO : Disabled
IDE HDD Block Mode : Enabled
Onboard FDC Controller : Disabled
Onboard UART 1 : 3F8/IRQ4
Onboard UART 2 : 2F8/IRQ3
Onboard Parallel Port : 378/IRQ7
Parallel Port Mode : Normal
ESC : Quit ↑↓→← : Select Item
F1 : Help PU/PD/+/- : Modify
F5 : Old Values (Shift)F2 : Color
F6 : Load BIOS Defaults
F7 : Load Setup Defaults

IDE HDD AUTO DETECTION. Make sure to select the option with MODE "LBA".


ROM PCI/ISA BIOS (2A5KFP6H)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.
HARD DISKS TYPE SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE
Primary Master :
Select Primary Master Option (N=Skip) : N
OPTIONS SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE
2(Y) 32014 3892 255 0 62040 63 LBA
1 32021 62041 16 65535 62040 63 NORMAL
3 32020 7755 128 65535 62040 63 LARGE
Note: Some OSes(SCO-UNIX Before v5.0) must use "NORMAL" for installation
ESC : Skip

Once you have set the settings, select "SAVE & EXIT SETUP".

Once POST is finished, your screen should look like this:


CPU Type : PENTIUM-MMX
Co-Processor : Installed
CPU Clock : 233MHz
Base Memory : 640K
Extended Memory : 64512K
Cache Memory : 512K
Diskette Drive A : None
Diskette Drive B : None
Pri. Master Disk : LBA,Mode 4,32021MB
Pri. Slave Disk : None
Sec. Master Disk : None
Sec. Slave Disk : None
Display Type : EGA/VGA
Serial Port(s) : 3F8 2F8
Parallel Port(s) : 378
Bank0 DRAM Type : EDO DRAM
Bank1 DRAM Type : None
Cache L2 Type : Pipe-Burst
BANK2 DRAM Type : None
PCI device listing ...
Bus No. Device No. Func No. Vendor ID Device ID Device Class IRQ
0 2 1 10B9 5219 IDE Controller 14
0 6 0 8086 1229 Network Controller 12
0 11 0 102C 00E0 Display Controller NA
0 12 0 104D 8047 Multimedia Device 10
0 13 0 8086 1010 Network Controller 15
0 13 1 8086 1010 Network Controller 11
LILO boot:

Chapter 4: Tool PS2 Direct Connection and Dsnet Commands

Change Keyboard Layout:

loadkeys (uk, us, de)

Default Password:

Username/Login: ***root***

Password: **administ**

Password Reset:

Username/Login: ***z***

Password: ***z***

Service ID: ***QA***

Press ***Ctrl-C*** to ship diagnostic check

Type: ***passwd root***

Then type: ***administ*** (or whatever you want - I'd recommend the default though)

Now type: ***reboot***

When your system reboots enter the default credentials and it will login to root.

Setup or Edit the IP Information:

(X.X = your ip setting of your network and not the letters X)

Type: ***cd /etc/sysconfig/network-scripts***

Type: ***vi ifcfg-eth0***

Now hold down the letter ***D*** on your keyboard until there is nothing in the document.

Hit the ***insert*** key.

Now type:

DEVICE=eth0

ONBOOT=yes

NETMASK=255.255.255.0

BROADCAST=192.168.0.255

IPADDR=192.168.x.x

BOOTPROTO=static

NETWORK=192.168.x.0

DHCP_HOSTNAME=DTL

GATEWAY=192.168.x.x</i>

Now hit: ***esc***

Hold Shift and hit the "***:***" key.

Type: ***wq!***

Now Reboot by typing: ***reboot***

Add New User

Log into the root account

Type ***adduser*** and add the new user name

Then type ***passwd*** and enter the new user's password

Retype new user password

Once done you can now log into the new user.

Run A Game in Retail:

cd /usr/local/sce/bin/

Type:.***/dsedb -r***

The TOOL and IP information on the CRT will turn off

Type: ***reset 2 100***

Show Current system Revisions:

Username/Login: ***z***

Password: ***z***

Service ID: ***QA***

Press ***Ctrl-C*** to skip diagnostic check

Run these Commands,

cd /usr/local/sony/diag/

then run,

../bin/romrev.sh

../bin/mpubid.sh

../bin/eerev

../bin/gsrev

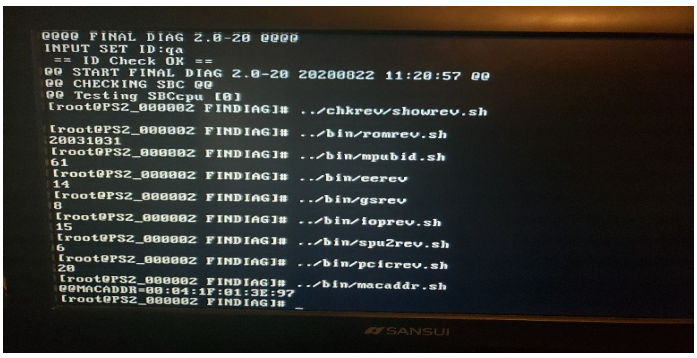
../bin/ioprev.sh

../bin/spu2rev.sh

../bin/pcicrev.sh

../bin/macaddr.sh

It should look like this.



Chapter 5: Ubuntu Terminal Commands

Install Dsnet toolset to ubuntu.

Download the dsnet toolset ***http://www.mediafire.com/file/oio3fbf81osi526/%5B140328%5Ddsnet-bin.7z*** and install this to ubuntu, this is required to dsnet into the tool ps2.

1. Install p7zip:

Code:

$ sudo apt install p7zip

2. Transfer **[140328]dsnet-bin.7z** to the virtual machine. There are many ways to do this, such as shared folders, **smb/http/ftp/afp/etc.** I suggest you use a search engine for you preferred method.

3. Extract the archive to folder "dsnet" in your home directory:

Code:

$ 7z x -o$HOME/dsnet \[140328\]dsnet-bin.7z

4. Add to your PATH

Code:

$ echo 'export PATH=$HOME/dsnet:$PATH' >> ~/.bash_profile

$ source ~/.bash_profile

5. Run the tool

Code:

$ dsedb -d <IP of DTL-T goes here>

Debug into the Tool PS2 Using DSnet

Open the terminal in ubuntu and type:

~$***cd dsnet***

~/dsnet$ ***./dsedb -d 192.168.XXX.XXX***

Or

~/dsnet$ ***./dsidb -d 192.168.XXX.XXX***

Backup your tool PS2 Flash:

./dsidb

dsidb R> ***ow 0xBF801400 0x1E000000***

dsidb R> ***ow 0xBF80100C 0x183F4F***

dsidb R> ***bsave dev1_IDs 0xBE1F0000 0x00000080***

dsidb R> ***bsave dev1_log.txt 0xBE1F0080 0x000000E0***

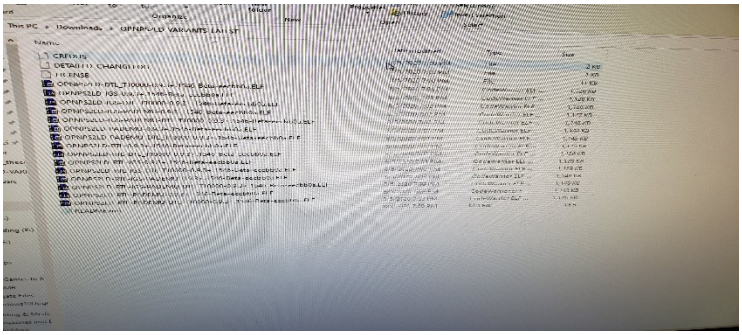
dsidb R> ***bsave dev2_1.bin 0xBFC00000 0x00200000***

dsidb R> ***bsave dev2_2.bin 0xBFE00000 0x00200000***

(The last one may not work and give you a bus error)

Chapter 6: Running OPL on a Tool PS2 (Ubuntu Terminal)

Download Ubuntu 18.04 or your latest version, and run it on a virtual machine (I use VMWare).



Use any build containing DTL_T10000 in the filename from this archive: ***(this archive has been updated to the latest release of OPL so now you can run OPL v1.2.0 on your tool ps2)***

https://github.com/ps2homebrew/Open-PS2-Loader/releases/tag/latest

Or compile your own:

make DTL_T10000=1 NOT_PACKED=1 DEBUG=1 INGAME_DEBUG=1 DECI2_DEBUG=1

This also will output more information in terminals.

Running Open PS2 Loader using dsedb/dsidb (can be done on the tool directly but more difficult.)

(Dsnet must be installed to the Ubuntu VM or Linux pc for this to work. Check FAQ on how to install Dsnet to ubuntu.)

Open two terminal windows in ubuntu and input these commands:

cd dsnet in both windows.

./dsedb -d 192.168.XXX.XXX in window 1 and

./dsidb -d 192.168.XXX.XXX in window 2.

In the window containing ***dsidb***, enter ***reset 0x70010 0x100*** for Composite video/VGA (RGB) and ***reset 0x70110 0x100*** for Component video

And in dsedb enter the run command and the file location for your opl program. For example, mine is

run /home/aidan/OPNPS2LD-DTL_T10000=1--PADEMU=1-RTL=1-0.9.3+.1562-Beta-41f7cf0.elf

Open PS2 Loader should be visible on the screen in less than a minute.

The meanings of the EE boot parameters:

- ***0x00000010***: Y/CrCb video output
- ***0x00010000***: Disable system call context check function
- ***0x00020000***: Disable system call argument check function
- ***0x00040000***: Disable semaphore maxCount check function

The meanings of the IOP boot parameters:

- ***0x100***: Run version 1.3.4 of the IOP library (same as retail models)

Check help reset in either ***dsedb*** or ***dsidb***, or see section "Boot Parameters" in "dsnet Overview".

Chapter 7: Best Ways to Run OPL on the Tool.

Once you have OPL running, it runs the same way as a retail ps2, the only difference is that certain things are done differently on the tool ps2 vs retail. For example, the tool ps2 does not have a internal HDD bay for the ps2 side of the tool.

There are 3 ways to play games/Beta's with OPL:

1. USB
2. Hard Drive
3. Network Share

Depending on which tool you have your experience may vary, there are 3 different versions of the tool. The DTL-T10000(10K), DTL-T10000H(10KH). DtlT15000(15K).

The 10K system is the most basic version of the tool ps2 and also one of the most common, this system has 1 ethernet port for the Linux command line side of the tool and a PCMCIA card slot for the ps2 side. Since there is no HDD slot or secondary ethernet slot, you will have to hunt down a Sony PCMCIA Network card and hard drive to access these features. The model number for the PC card is **SCPH-10190** and the model number for the HDD is **SCPH-20400**, this is what they look like.

Both of these items are pretty rare and may cost upwards of $200 for both of these together but if your vigilant, you might be able to get both of these separately for cheaper. The PCMCIA card has both a proprietary HDD port and another ethernet port so you can use the 2 features on OPL.

This issue is present on all three systems but is less of an issue for the 10KH system since it has an extra network card.

USB is not recommended to play games with on OPL since the USB standard at the time is 1.1 and most games played on USB is so laggy its unplayable

Chapter 8: Full Command List

Change Keyboard Layout (Direct Connect, Dsnet):

loadkeys (uk, us, de)

Default Password (Direct Connect, Dsnet, Ubuntu):

Username/Login: root

Password: Administ

Password Reset (Direct Connect):

Username/Login: z

Password: z

Service ID: QA

Press Ctrl-C to ship diagnostic check

Type: passwd root

type: Administ (or whatever you want - I'd recommend the default though)

type: reboot

Setup or Edit the IP Information (Direct Connect):

Type: cd /etc/sysconfig/network-scripts

Type: vi ifcfg-eth0

hold down the letter D on your keyboard until there is nothing in the document.

Hit: Insert key.

type:

DEVICE=eth0

ONBOOT=yes

NETMASK=255.255.255.0

BROADCAST=192.168.0.255

IPADDR=192.168.x.x

BOOTPROTO=static

NETWORK=192.168.x.0

DHCP_HOSTNAME=DTL

GATEWAY=192.168.x.x

hit: esc

Hold Shift and hit the ":" key.

Type: wq!

Type: reboot

Add New User (Direct Connect):

Log into the root account

Type: adduser (Username)

Type: passwd (Password)

Retype: (Password)

Logout and log into new user

Run A Game in Retail (Direct Connect, Dsnet, Ubuntu):

Type: cd /usr/local/sce/bin/

Type:./dsedb -r

Type: reset 2 100

Show Current system Revisions (Direct Connect, Dsnet, Ubuntu):

Username/Login: z

Password: z

Service ID: QA

Press Ctrl-C to skip diagnostic check

Type: cd /usr/local/sony/diag/

Type: ../bin/romrev.sh

Type: ../bin/mpubid.sh

Type: ../bin/eerev

Type: ../bin/gsrev

Type: ../bin/ioprev.sh

Type: ../bin/spu2rev.sh

Type: ../bin/pcicrev.sh

Type: ../bin/macaddr.sh

Terminal into the Tool PS2 Using DSnet (Ubuntu):

Open the terminal in ubuntu.

Type: ~$cd dsnet

Type: ~/dsnet$ ./dsedb -d 192.168.XXX.XXX

Or

Type: ~/dsnet$ ./dsidb -d 192.168.XXX.XXX

Backup your Tool PS2's Flash (Ubuntu):

Type: ./dsidb

dsidb R> ow 0xBF801400 0x1E000000

dsidb R> ow 0xBF80100C 0x183F4F

dsidb R> bsave dev1_IDs 0xBE1F0000 0x00000080

dsidb R> bsave dev1_log.txt 0xBE1F0080 0x000000E0

dsidb R> bsave dev2_1.bin 0xBFC00000 0x00200000

dsidb R> bsave dev2_2.bin 0xBFE00000 0x00200000

(The last one may not work and give you a bus error)

Running Open PS2 Loader using dsedb/dsidb (Ubuntu):

Open two terminal windows in ubuntu and input these commands:

Type: cd dsnet in both windows.

Type: ./dsedb -d 192.168.XXX.XXX in window 1 and

Type: ./dsidb -d 192.168.XXX.XXX in window 2.

In the window containing dsidb, Type reset 0x70010 0x100

And in dsedb Type the run command and the file location for your opl program. For example, mine is

run /home/aidan/OPNPS2LD-DTL_T10000=1--PADEMU=1-RTL=1-0.9.3+.1562-Beta-41f7cf0.elf

Open PS2 Loader should be visible on the screen in less than a minute.

The meanings of the EE boot parameters:

- **0x00000010: Y/CrCb video output**
- **0x00010000: Disable system call context check function**
- **0x00020000: Disable system call argument check function**
- **0x00040000: Disable semaphore maxCount check function**

The meanings of the IOP boot parameters:

- **0x100: Run version 1.3.4 of the IOP library (same as retail models)**

Check help reset in either dsedb or dsidb, or see section "Boot Parameters" in "dsnet Overview".

Install Dsnet on ubuntu.

1. Install p7zip:

Code:

$ sudo apt install p7zip

2. Transfer [140328]dsnet-bin.7z to the virtual machine. There are many ways to do this, such as shared folders, smb/http/ftp/afp/etc. I suggest you use a search engine for you preferred method.

3. Extract the archive to folder "dsnet" in your home directory:

Code:

```
$ 7z x -o$HOME/dsnet \[140328\]dsnet-bin.7z
```

4. Add to your PATH

Code:

```
$ echo 'export PATH=$HOME/dsnet:$PATH' >> ~/.bash_profile
```

```
$ source ~/.bash_profile
```

5. Run the tool

Code:

```
$ dsedb -d <IP of DTL-T goes here>
```

Tool PS2 Webpage Default Password:

Username is "Administrator"

Password is "Administrator"

FAQ

How do I reset the root password?

In the login prompt, type in "z" as the username and password. Type in QA, hit enter, then press CTRL-C right after. You can now use "passwd" to set the root password.

How do I Dsnet into the tool?

You can't Dsnet using the "root" account, so you need to make your own account using "adduser" and set the password using "passwd" for that account.

Once that is done, you can Dsnet into your created account by downloading putty on any os and typing in the ip address.

How do I use the dsnet tools on the PC SBC?

The dsnet tools are located in /usr/local/sce/bin. If you want to access them without typing the full path, you can add the aforementioned path to your PATH variable. If you want to add it automatically, enter it in the (your home directory)/.bash_profile file.

How do I log into the "root" account from another account?

You can type in "su", then enter the password for the "root" account.

How do I shut down the system from the shell?

You can run the "shutdown" utility as "root" located in the /sbin directory with the following arguments: "-h" "now".

Shutdown -h now

How do I restart the system from the shell?

You can run the "restart" utility as root.

What is the default Username and Password for the Tools web interface?

Defaults for the web interface:

Username is "Administrator"

Password is "Administrator"

Can the Tool Ps2 Run Ps1 Games?

In theory it is possible but I have not tried it myself. If you would like to try it here is the thread of instructions who has done it.
https://www.obscuregamers.com/threads/running-ps1-game-on-dtl-t10000-tool.1949/

How do I use the tool if my memory card/controller ports are broken?

Due to the construction of the Tool PS2, may board on the inside of the system are very delicate and can get damaged in transportation, one of these board contains the memory card and controller ports. If in the event yours does get damaged, see if it can be repaired, the retail equivalent will not work on this system. If your board is not repairable, you can run versions of OPL that have PADEMU enabled. PADEMU allows you to play games or betas with USB Controllers vs official controllers.

How do I open my tool to repair it or maintain it?

The tool ps2 was not known for its user accessibility and repairability, the best guide I can suggest is at this link, it shows a step by step breakdown of the tool ps2 with high res pictures so you can fix any issue with your tool.
https://cupdf.com/document/ps2-tool-guide.html

Can I use a bigger Hard drive on my tool?

Yes, you can, if you are able to get ahold of one of the external hard drives with the pcmcia card, you can upgrade the stock 40gb hdd on the inside of the external enclosure for something a little bigger. If you have access to an IDE to SAta adapter you can use drives up to 1tb in size. Here is an example.

How do I develop games on my Tool PS2?

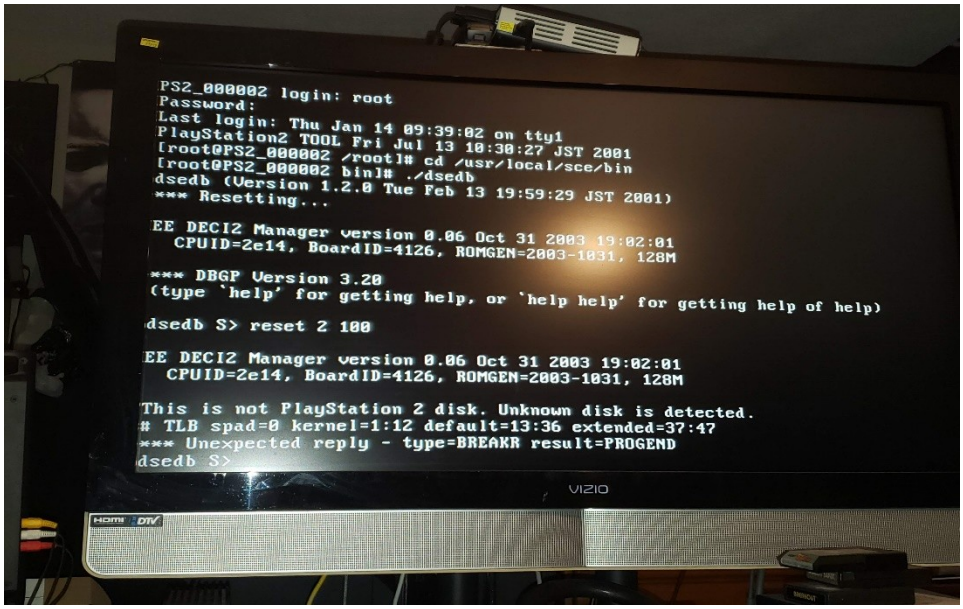
You can develop games on the tool by using programs like Code Warrior and Prodg. It is best to watch these videos to explain how to get started.

https://www.youtube.com/watch?v=nfTNHj2Ual4&t=1s

And

https://www.youtube.com/watch?v=cJFkganIVOo&t=1505s

What do I do if I get the “This is not a PlayStation 2 Disc” error when trying to load a game in the disc drive?


PS2_000002 login: root
Password:
Last login: Thu Jan 14 09:39:02 on tty1
PlayStation2 TOOL Fri Jul 13 10:30:27 JST 2001
[root@PS2_000002 /root]# cd /usr/local/sce/bin
[root@PS2_000002 bin]# ./dsedb
dsedb (Version 1.2.0 Tue Feb 13 19:59:29 JST 2001)
*** Resetting...
EE DECI2 Manager version 0.06 Oct 31 2003 19:02:01
CPUID=2e14, BoardID=4126, ROMGEN=2003-1031, 128M
*** DBGP Version 3.20
(type `help' for getting help, or `help help' for getting help of help)
dsedb S> reset 2 100
EE DECI2 Manager version 0.06 Oct 31 2003 19:02:01
CPUID=2e14, BoardID=4126, ROMGEN=2003-1031, 128M
This is not PlayStation 2 disk. Unknown disk is detected.
TLB spad=0 kernel=1:12 default=13:36 extended=37:47
*** Unexpected reply - type=BREAKR result=PROGEND
dsedb S>
VIZIO

Above is a picture of the error. This is currently still a problem I am facing with my tool today, the best explanation and potential fix for the problem can be found here.

Update 10/21/23: The error above can be caused by multiple issue. My issues are that either my laser is dead, my disc is not master patched, or the disc is not region correct. I checked the system and it is a NTSC-J DVD drive region and may not like the disc.

https://www.obscuregamers.com/threads/ps2-tool-problem.2108/#post-13752

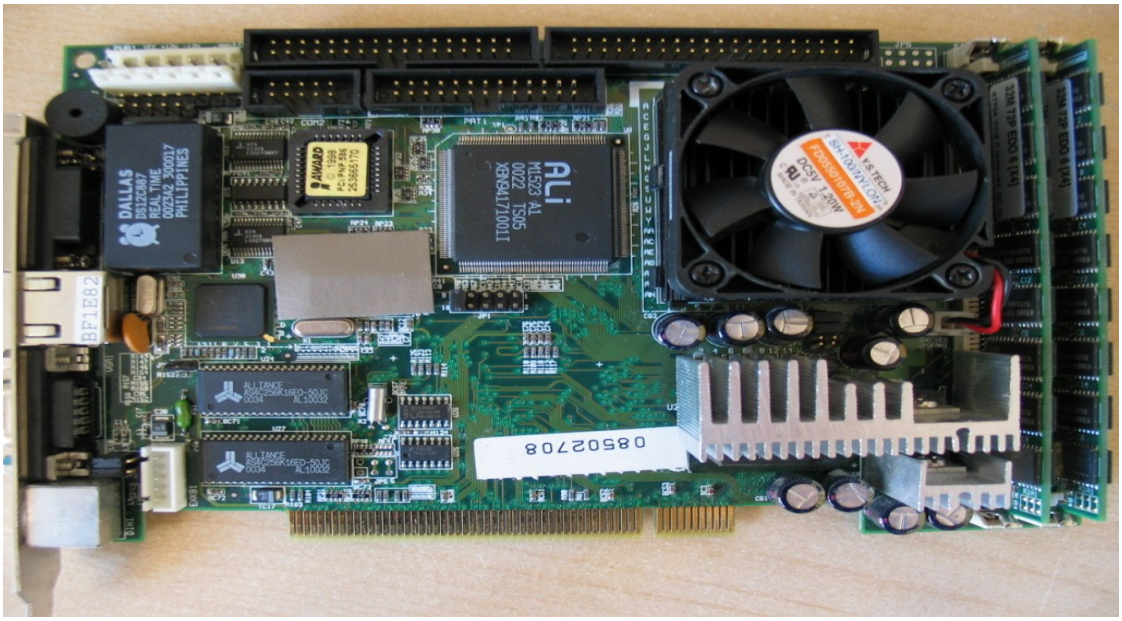
If I have a DTL-T15000 (15K) system, where can I find information?

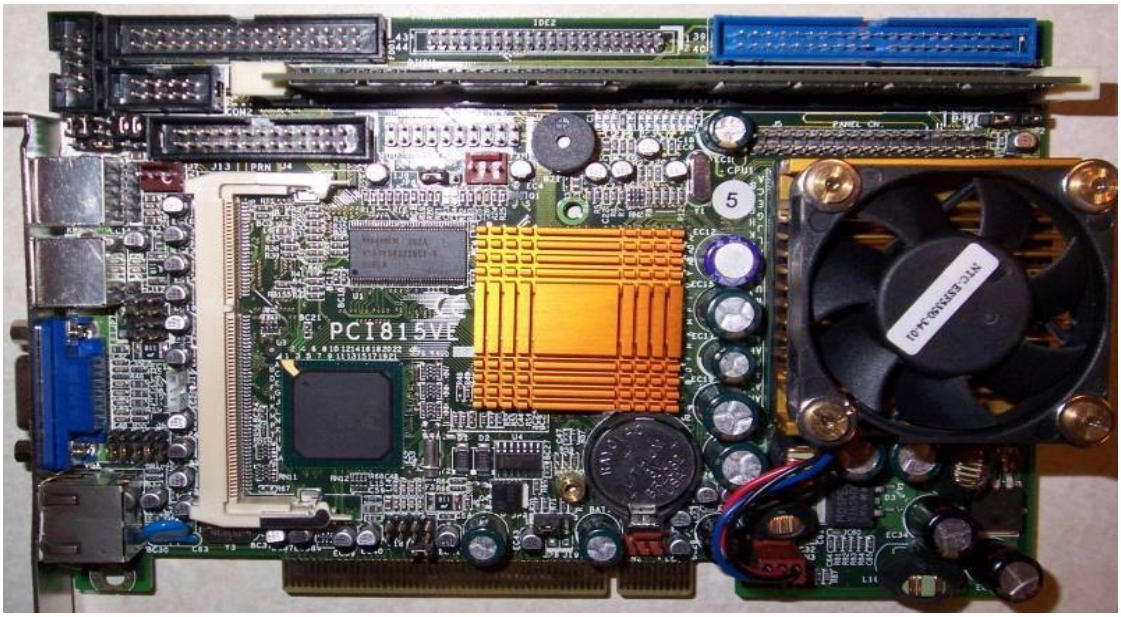
As stated, you are very lucky if you have a 15k system, if you need info about it, the best place to look is here.

https://www.obscuregamers.com/threads/sony-ps2-tool-dtl-t15000-drive-images-and-investigation.2669/

What do I do if I get a CMOS Checksum Error?

This could mean 2 things. 1. your CMOS battery is dead, or 2. Your clock needs to be reset in the bios. It all depends on what version of PC card you have in your tool, here are the 2 known versions.





If you have the card on the top picture, there is no way to easily replace the battery so you will need to reset the clock in the bios. If you have the card in the bottom picture you can easily replace the coin cell battery.

Can I Upgrade the processor on the PC Card?

I have seen a video on YouTube where someone successfully upgraded the processor, I have not done it myself but it is possible. The end result from what I saw was that it does not provide any added benefits. If you would like to try this at your own risk, here is the video.

https://www.youtube.com/watch?v=FfGsOCssEwY

Can I use a usb keyboard to directly connect and type in the Tool's terminal?

Yes, you can, I tested a green PS/2 to usb adapter on the tool and after finding a compatible keyboard, it worked perfectly. You just need to make sure that the keyboard you are using is old enough to have PS/2 logic built in so it can be recognized by the tool. Try usb keyboards between 2001 and 2005. They are most likely to work since they were made during the era of windows XP.

Can I Change the keyboard layout?

Some keyboards are missing the laten symbol (=). It is possible to change they keyboard layout with this command to fit your keyboard.

Loadkeys (us, uk, de, etc)

Is there any way to disable writing to the Flash ROM?

I do not know of such a way (unless you manually disconnect its write-enable line and set it to inactive state), but depending on the DIP switch on the back, only half of the Flash-ROM will be written on update (AFAIK). But disconnecting the /WE line will also prevent reading the Flash ID and other data, so this won't work correctly**.**

How much of the TOOL's internals can you take out/disconnect before basic functionality (running programs on the EE and IOP) will stop working?

In theory the CDVD PCB and the AIF (+Dev9) PCB can be removed and it might even be possible to disconnect the Backplane from the MPU4 board, leaving you with a bare MPU board, that if you power somehow should run as a bare PS2 (with more RAM), but it will probably require emulating some of the signals that connect it with the backplane and will a different ROM image that does not try to initialize the missing components. But if you need it to run as a TOOL, then there is hardly anything that can be disconnected, leaving it still fully-functional (maybe the AIF board only and additional PCI boards?).

(After some time): I took out the following:

CDVD drive (and associated ribbon cable)

AIF HDD

SIO2 ports (controller and memory card)

Eject board (and associated cable)

LED board (and associated cables; showing the status of TOOL/WS and CDVD/EMULATOR modes, as well as one LED for 3 HDDs)

Is it possible to use the other three PCI slots from the PC side or the PS2 side?

The PIF is a peripheral PCI slave device on the PCI bus, so AFAIK it cannot become a PCI master and communicate with other PCI devices.

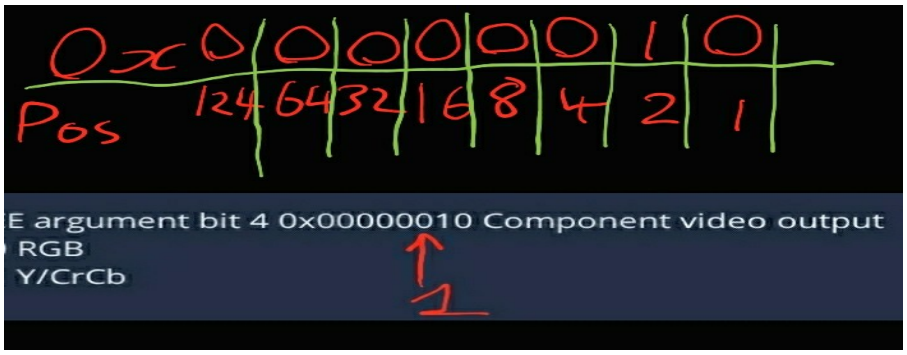
It should be possible to use any of the PCI slots for mostly anything PCI slots can be used for, although there may be a requirement in which slot the SBC must be and also some of the PIF drivers (powercontrol) require the PIF to be connected to PCI slot 0 (if I remember correctly). (Otherwise up to four MRP devices are supported, but in this case the PIF is integrated on the backplane, and it needs to be on a PCI card for this.)

Is there a way to switch to YCbCr mode?

EE argument bit 4 0x00000010 Component video output

0 RGB

1 Y/CrCb



Is there a way to make the SBC go past the initialization screen faster?

I already disabled the built-in floppy controller, disabled boot seeking, disabled the extended memory checking, set the boot order to C only, and disabled the primary slave HDD.

I can't think of anything more than what you already did. You could try updating the BIOS, and look for a "fast-boot' option.

As for the Linux startup - you could probably edit the bootloader configuration, and the Linux startup scripts.

Has anyone benchmarked the speed of the SBC PCI<->IOP yet?

I'm curious if this is faster than the speed of an HDD connected to the Network Adapter.

It should be very fast compared to PS2 Ethernet connection speed, but I think it is at least two to five times slower than the PS2 internal HDD. The maximum transfer rate on the IOP is ~120MB/s, and when transferring data between a peripheral device (SPEED chip - HDD) and the EE it is half that ~50MB/s. The SPEED chip SSBUSC channel is configured to the fastest SSBUSC settings (and so is the CDVD device if I remember correctly). But the EXTRA SSBUS channel uses lower speeds - at least twice lower, but I don't know for sure (because of the multiple buffers between the SSBUS and the PIF FPGA). Also, the PCI interface limits the maximum speed somewhat.

So, it is probably the second or third fastest peripheral device after the internal HDD.

Are there any upgrades or replacements for the SBC?

I have read about this on the forums (but I don't remember the thread). On the PS2 TOOL, the SBC was meant only as a communication processor and no work was done directly on it. (Almost quoting SP193)

Also given that Ethernet is used to connect it to the development PC(s), it probably didn't need to be particularly fast.

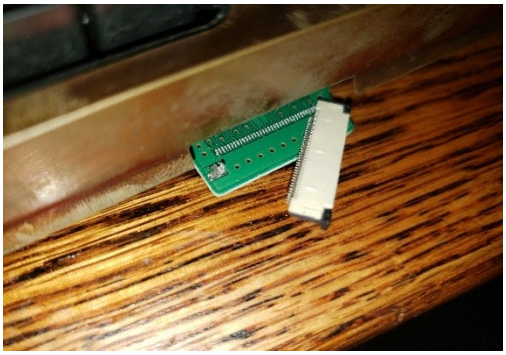
On the PA DTL-T15000 (AFAIK) there is a dedicated MCU connecting the main sampling FPGA to the PIF FPGA and/or PCI bridge, which probably enables faster transfers of sampled data to the network (but I don't know exactly how this system works).

What do I do if my Tool ps2's Laser has died. What is a compatible replacement?

The laser can be replaced with KHS-400A, KHS-400B, or KHS-400C. Using KHS-400C is highly recommended since it is more reliable than the other two.

What do you do if your Controller/Memory card Module is damaged and not working. Is there a retail substitute replacement?

Example from my tool ps2.



No sadly there is not, I tested my tool ps2 with a retail module from a SCPH-30000 model system and it lights up the controller light but does not respond to any buttons. I have heard it is possible to exchange it with a module from a Japan only

SCPH-10000 – SCPH- 18000 systems but have not verified if this works. It is best to try and repair the tools module if possible.

How do I install Dsnet on ubuntu?

1. Install p7zip:

Code:

$ sudo apt install p7zip

2. Transfer [140328]dsnet-bin.7z to the virtual machine. There are many ways to do this, such as shared folders, smb/http/ftp/afp/etc. I suggest you use a search engine for you preferred method.

3. Extract the archive to folder "dsnet" in your home directory:

Code:

$ 7z x -o$HOME/dsnet \[140328\]dsnet-bin.7z

4. Add to your PATH

Code:

$ echo 'export PATH=$HOME/dsnet:$PATH' >> ~/.bash_profile

$ source ~/.bash_profile

5. Run the tool

Code:

$ dsedb -d <IP of DTL-T goes here>

Can I run the Tool PS2 on a modern tv with HDMI and what adapter works with it:

Video output to HDMI using PlayStation port.

Cheap Amazon Adapter -

Works ok. Little blurry. Does not require power input to work. Do not need to supply power for this cable to work. If I have the power hooked up when booting the TOOL, the DVD drive would not open/close.

PS2 to HDMI Adapter PS2 HDMI Cable

https://tinyurl.com/2fjw9lmk

Nicer Higher Quality Cable-

Works well. Very crisp. Does need secondary power, but does not affect the DVD drive like the cheaper cable. Requires an additional Mini HDMI to HDMI cable.

https://tinyurl.com/ysokgm9a

Sources

For all the information given here, here are my sources:

https://hddguru.com/software/HDD-Raw-Copy-Tool/

https://youtu.be/uMl9RIr8TG8

https://www.obscuregamers.com/threads/running-ps1-game-on-dtl-t10000-tool.1949/

https://cupdf.com/document/ps2-tool-guide.html

https://www.obscuregamers.com/threads/ps2-tool-problem.2108/#post-13752

https://www.obscuregamers.com/threads/sony-ps2-tool-dtl-t15000-drive-images-and-investigation.2669/

https://www.youtube.com/watch?v=nfTNHj2Ual4&t=1s

https://www.youtube.com/watch?v=cJFkganIVOo&t=1505s

http://www.mediafire.com/file/oio3fbf81osi526/%5B140328%5Ddsnet-bin.7z

https://github.com/ps2homebrew/Open-PS2-Loader/releases/tag/latest

https://www.assembler-games.com/threads/guide-playstation-2-tool-beginners-guide-setup-and-running-retail.67268/

https://www.obscuregamers.com/threads/ps2-dtl-t-thread.1172/

https://www.obscuregamers.com/threads/which-redhat-iso-for-ps2-development.1210/

https://www.obscuregamers.com/threads/sony-ps2-dsnet-tools-on-windows-subsystem-linux-wsl-w-ubuntu.2713/

Contact me

Please feel free to contact me for any questions you have about your tool.

Discord: slycooper124#6199

Youtube:
https://www.youtube.com/channel/UC3PAmk9XrTikNJrpsr8y4mA/videos/upload?filter=%5B%5D&sort=%7B%22columnType%22%3A%22date%22%2C%22sortOrder%22%3A%22DESCENDING%22%7D